NOTE
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DATA ON THE PELAGIC STINGRAY, *PTEROPLATYTRYGON VIOLACEA* (BONAPARTE, 1832) (MYLIOBATIFORMES: DASYATIDAE) CAUGHT IN THE RIO DE JANEIRO COAST

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The pelagic stingray, *Pteroplatytrygon violacea* is a thick, dark stingray, with a broadly rounded snout and a trapezoidal disc. This species is easily recognized by its conspicuos pygmentary pattern, displaying a uniform dark-purple on dorsal body surface and light-violet on its ventral surface. The eyes are small and do not protrude from the body as in several other stingrays (Fig. 1) (BIGELOW; SCHROEDER, 1953). This taxon has a circumtropical and subtropical distribution, being caught at depths from 37 to 1463 m. It is the only oceanic-pelagic member of the family Dasyatidae currently known (WILSON; BECKETT, 1970; MENNI; STEHMANN, 2000; MOLLET, 2002).

Despite the fact that this species has no comercial value, some captures in longliners for swordfish and tuna as by-catch are reported worldwide (*e.g.* São Paulo/Brazil - AMORIM et al., 1998; California/USA - MOLLET, 2002; Uruguay - DOMINGO et al., 2005; Taiwan - JOUNG et al., 2005; Atlantic ocean – WILSON; BECKETT, 1970).

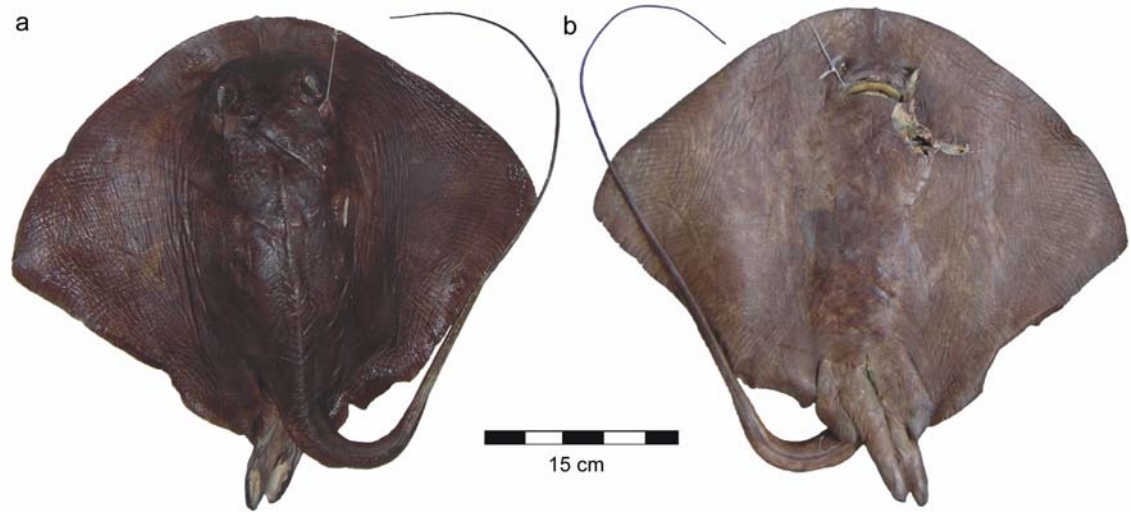

Fig. 1. *Pteroplatytrygon violacea*, male 420 mm DW: a) dorsal view and b) ventral view.

The species reproductive behavior has been poorly understood. Only recently, with the increasing of captivity studies, its reproductive and feeding habits are beginning to be known (MOLLET et al., 2002). This study intends to contribute to the knowledge of the species, focusing on three main points: (1) comments on some biological aspects of landed specimens of *P. violacea*, (2) providing the first published record of this species in Brazilian shallow waters (maximum depth 50 m) and (3) to discuss which parameters can influence its seasonal distribution on the Rio de Janeiro coast.

Specimens and data were obtained from the artisanal fishery landings at Itaipu Beach, Niterói, RJ (22°58'S and 43°03'W, Fig. 2), Southeastern Brazil. The landings were monitored weekly from October 1999 to December 2001. *P. violacea* specimens were caught by handline fishery operating at depths from 30 to 45 m. This fishery is concentrated in adjacent areas of "Ilha do Pai" (22°59'S and 43°05'W) and "Ilha Rasa" (23°04'S and 43°08'W). After landing, specimens were identified, measured (disc width DW - in mm), weighted (total weight TW – in g), sexed, stage of sexual development determined and dissected to remove stomach content.

Eight specimens were examined, measuring between 480 and 655 mm (mean = 538 $\pm$47 mm DW) and weighing between 3000g and 8500g (TW). The specimens were caught only in January and February, 2000 and 2001. Few landings of this species were known in the local fishery and due to the low economic value, this ray is often discarded by fishermen. This pattern of temporal distribution was not observed in other elasmobranchs in Itaipu Beach.

The interviews with fishers suggest that *P. violacea* follows schools of the species *Trichiurus lepturus* (Linnaeus, 1758), both species approaching the coast hunting schools of small fishes. The analysis of four stomach contents (two females and two males) revealed two empty stomachs, while the other two contained teleost remains not identified (vertebrae fragments and crystallines). In oceanic-pelagic areas of southern Brazil the diet of the species includes a variety of food items, like amphipods, decapods and teleostean fish (AMORIM et al., 1998; MAZZOLENI; SCHWINGEL, 2002).

All specimens herein examined were mature, five of them females and three males. The females had flaccid uterus, two of them aborted the litter on board, and fishers set them free. In the offshore region of southern Brazil, pregnant females were caught between January and February; females carried mid-term and near-term embryos (AMORIN et al., 1998; MAZZOLENI; SCHWINGEL, 2002). In both extremes of *P. violacea* distribution in the western South Atlantic (Northeast Brazil and southern Uruguay), there are no records of pregnant females aborting on board (MENNI et al., 1995).

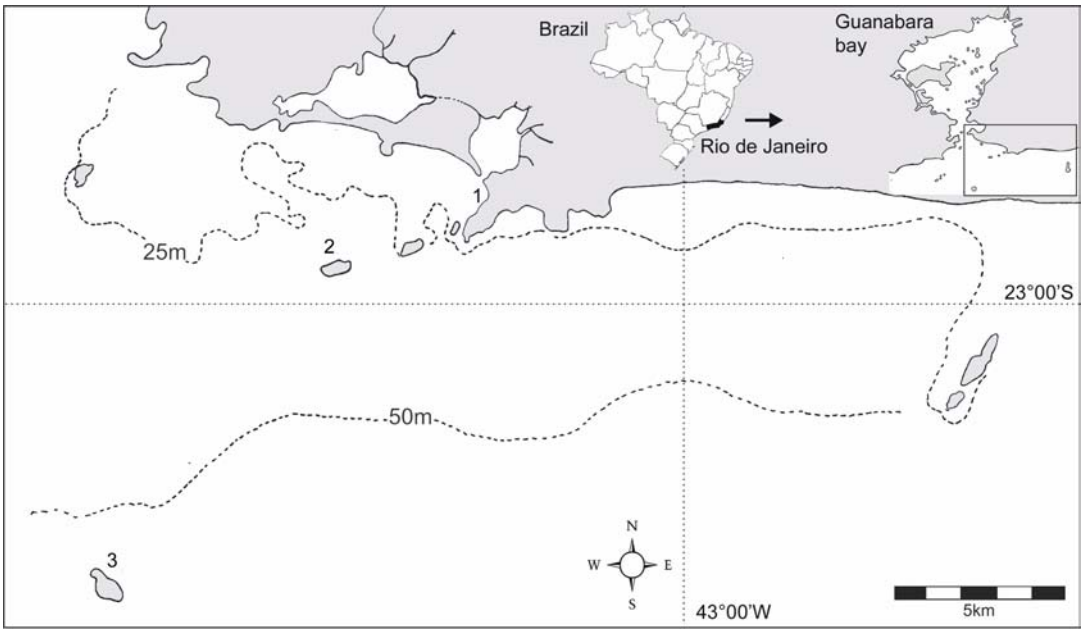

Fig. 2. Map of the studied area showing the isobates of 25 and 50 meters. 1- Itaipu Beach; 2- "Ilha do Pai"; 3- "Ilha Rasa".

The distribution of *P. violacea* througout the Brazilian offshore shows that this species is related to oceanic islands being considered an epipelagic species (MAZZOLENI; SCHWINGEL, 2002; VASKE JR et al., 2005). Unlike other areas, in Itaipu Beach, *P. violacea* is caught in coastal waters, in dephts shallower than 45 m, and seems to be related with cold waters, below 18°C.

In summer and late spring, Rio de Janeiro coastal waters suffer influences of changings in water mass, like the coastal upwelling observed more intensely from Arraial do Cabo to Ilha Grande. During this phenomenon, the cold water mass deriving from deep oceanic regions (SACW - South Atlantic Central Water mass) penetrates into the bottom layer over the continental shelf (MATSUURA, 1986). This phenomenon affects the distribution of several teleosteans and, at least, four species of elasmobranchs (*Squatina* spp. *Psammobatis bergi* and some rajids), that show a trend to migrate from 50-70 m depth to shallow waters between 25-45 m depth, following the cold currents full of nutrients (FAGUNDES NETTO ; GAELZER, 1991).

We assume that this changing in the marine current also changes the diversity of the marine species of Itaipu Beach, bringing oceanic species to coastal waters. *Pteroplatytrygon violacea* as an epipelagic species inhabits deep waters like those from SACW, so our data suggest that the species has an accidental occurrence in coastal waters, here exemplified by its occurrence on Itaipu Beach, being deviated from oceanic waters by changes in the water mass. While further studies do not focus the space and temporal variation of other groups, such as the teleosts, the extension of the upwelling influence on other localities of the Southeastern region beyond Arraial do Cabo, will not be understood.

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